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October 23, 1996

Acting Secretary William F. Caton
Federal Communications Commission
1919 M Street, NW, room 234
Washington, DC 20554

Dear Secretary Caton:

re: FCC Notice of Inquiry
Implementation of Section 255 of the Telecommunications Act of 1966
WT Docket No. 96-198.

Enclosed are the original and nine copies of the comments of Self Help for Hard of Hearing People, Inc. (SHHH) on the above referenced Notice of Inquiry.

Assurance of access to the telecommunications network is of vital concern to our constituency, the 26 million people in the U.S. who are hard of hearing.

We appreciate the opportunity to submit these comments.

Sincerely,

Donna L. Sorkin
Executive Director

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Implementation of Section 255 of the Telecommunications Act of 1996	)	
	)	WT Docket No. 96-198
	)	
Access to Telecommunications Services, Telecommunications Equipment, and Customer Premises Equipment By Person with Disabilities	)	

COMMENTS OF

SELF HELP FOR HARD OF HEARING PEOPLE, INC. (SHHH)

1. Introduction

Self Help for Hard of Hearing People, Inc. (SHHH) hereby submits comments in response to the Federal Communications Commission's (FCC) Notice of Inquiry (NOI) on Access to Telecommunications Services, Telecommunications Equipment, and Customer Premises Equipment By Persons with Disabilities.

SHHH is a national educational organization representing people who are hard of hearing of all ages and degrees of hearing loss. Through a National office, five state associations and a network of 250 chapters and groups across the country, SHHH members consistently work towards increasing communication access to enable people who are hard of hearing to continue to function in mainstream society. Access to telecommunications is integral to

being able to actively participate in today's world. SHHH recognizes the FCC's long standing commitment to access to telecommunications

for all Americans and appreciates the opportunity to submit these comments.

IV. Implementation and Enforcement

A. Resolution of complaints

29. & 30. SHHH believes there absolutely needs to be rules on accessibility. Leaving it to market forces will not work and has never worked up to now in responding to the need for disability access.

If the concept of universal design (from the initial stages of design ensuring products and services will be accessible to and usable by a broad range of users) is to become a reality, the FCC must provide telecommunications providers and manufacturers and others included in providing such services with clear guidelines so that they understand the extent and nature of their accessibility requirements from the outset. If access is not taken into consideration at the early design stage it becomes more burdensome to make services and products accessible later as redesign and retrofitting are costly. Then companies could argue it is not

readily achievable whereas it might well have been readily achievable if taken into consideration at the outset. Going forward without regulations for design could lead into the trap of Section 508 of the Rehabilitation Act an example of no regulations equating to no compliance. The alternative suggestion of ruling on a case-by-case basis, taking into consideration the thousands of new products and services brought to market yearly, would seem to be setting up a likely chaotic situation.

SHHH believes promulgation of regulations is critical if the intent of the law is to be realized.

31. Guidance is needed on the relationship between the obligation of service providers and equipment manufacturers. Service providers have direct control of their system characteristics which relates to equipment and the equipment itself, through choice of manufacturer. SHHH believes that service providers can and should influence the level of access available to their customers with disabilities. In the area of digital wireless phones, for example, service providers can select their handset manufacturers based on the level of access they design into their handsets. Service providers should set requirements for accessible equipment provided by their manufacturers and build this into their contractual agreements.

32. SHHH is in favor of process guidelines to guide telecommunications companies through various requirements to ensure

access during the design and product/service development stages. Guidelines which direct companies to document efforts to achieve access would allow consumers to have a better feel for whether a company had made a good faith effort to achieve access. This would both result in a greater number of products and services being accessible and would likely have the positive effect of reducing complaints once the product or service is rolled out. Consultation with consumers with disabilities in the design and development stage can save service providers time and money in the long run and could increase market share by ensuring products that meet consumer needs. Companies routinely survey the general population for information to be taken into account when developing new products and this type of assessment this should be extended to customers with disabilities. Companies already carrying out this type of consumer consultation, doing this through advisory committees and other means, attest to the beneficial outcomes of this approach in preventing costly mistakes and opening up new approaches and ideas for products which, though designed with a disability group in mind, ultimately were popular with everyone e.g. vibrating pagers.

SHHH supports guidelines which require companies to undergo "disability impact analysis". However, such regulations should be in addition to, and not in place of, specific performance and design standards.

There are already some telecommunications companies that

follow process, performance and design guidelines to ensure that their products can be used by the widest customer base possible. FCC regulations for Section 255 would make this an industry-wide practice.

B. Developing Equipment and CPE Guidelines in Conjunction With the Access Board

35. The FCC should provide the Access Board a record from this proceeding and may comment on the guidelines the Board proposes, particularly on enforcement matters with which the FCC is charged. SHHH recommends that the FCC adopt the guidelines developed by the Access Board for equipment and periodically review them.

III Statutory Requirements

A. Coverage

3. Manufacturers Subject to Section 255

11. There are 500 million people worldwide with disabilities who will be disadvantaged in all areas of their lives without access to global telecommunications networks. Regulations promulgated by the FCC could influence global markets and establish the U.S. in a leadership position in opening up access to global telecommunications for people with disabilities.

B. Requirements

2. Definition of "Readily Achievable"

15. SHHH believes that the entire operations and resources of a

parent corporation and its subsidiaries must be taken into consideration when calculating the resources available to cause products and services to be accessible to and usable by persons with disabilities, just as is the intent of the ADA.

16. SHHH believes that providers of telecommunications services and manufacturers of equipment, though unable to readily achieve access in the initial design of a product or service, should have an ongoing obligation to make the service or product accessible as new technology comes along that makes access readily achievable. Manufacturers and providers cannot be permitted to ignore new technologies. The ongoing obligation should apply whether or not a particular product or service is upgraded.

3. Definition of "Accessible To" and "Usable By"

22. A manufacturer or service provider should aim for the goal of access/usability for persons with various disabilities. If, after a good faith effort, they can demonstrate that this is not readily achievable, then offering equipment and services which are accessible to specific disabilities but not every disability might be an acceptable solution. We recognize that it might not be possible to design every product and service so that they are accessible to every disability but that should be the goal when designing a new product/service.

It is important to stress that companies should provide a range of

products and services which ensure access to people with wide ranging disabilities. Our goal in the United States is to provide persons with disabilities the opportunity to perform the functions which telecommunications products and services make possible to the general population, though they may have to perform those functions differently.

23. In assessing the extent to which accessible telecommunications services, equipment and CPE are currently available the comments from SHHH will focus on ensuring access to specific services and products by people who are hard of hearing. We expect that organizations representing other disabilities are better able to cover services and products available to their particular constituencies.

Analog cellular phones. Introduced in 1983, there are now approximately 33 million cellular phones in use in the U.S. There are about 25 models with built-in hearing aid compatibility (HAC) which people with hearing aids with telecoils can use, as in wireline phones. (see attached list). However, there are still companies that do not provide inductive coupling for direct linkage to hearing aids. Further it is not easy for customers with hearing aids to obtain information about which cellular phones are HAC. SHHH is working to educate its members and others about how to shop for a wireless phone but there are still many people who either think no analog phones are accessible to them or do not know how to

find ones that are. Some companies provide external wired devices, which are basically retrofits. Many consumers do not favor these especially given the fact they must use them with phones which are designed to be wireless. All cellular phones should be designed so that hearing aid wearers can use them, with the option of acoustic or internal coupling.

Volume Control. Most wireless phones (analog and digital) have volume control though consumers with hearing loss repeatedly tell us they would like the capability to increase the volume beyond what is typically offered.

Vibratory Alerts. There are a limited number of wireless phones with vibratory alerts, which is an important option for people with hearing loss as many cannot hear the ring of a wireless telephone. Remote vibratory alerts would be preferred as women typically do not carry phones in their pocket but rather in a briefcase or purse.

Digital wireless phones. These phones are the wave of the future with 80 million instruments predicted to be in use in the U.S by the turn of the century. Though they have potential advantages for people with disabilities, including people with hearing loss, due to portability, clarity of signal, and personalization of features, they are not yet accessible to many people who wear hearing aids and in fact cause interference with some hearing aids. Various studies are underway to address

interference issues and to develop solutions for accessibility. In the meantime, some companies are making available attachments, as interim solutions, to allow hearing aid wearers with telecoils to use the phones. This approach works for some people but not everyone as the interference is not always reduced with the attachment. Also the attachment is not convenient to use and does not provide equivalent access. Other companies are working to modify their handsets, through various methods, to reduce the interference, so that hearing aid wearers can use the phones without external devices.

Standards are being developed for (1)handsets which create only the acceptable level of interference and for (2) hearing aid immunity. To ensure access for hearing aid wearers to digital wireless phones, changes both to phones and hearing aids are likely needed. Hence, both the wireless and hearing aid industries will need clear guidelines and standards to follow. SHHH urges the FCC to adopt the standards and guidelines which are being developed by the Hearing Aid Compatibility and Accessibility to Digital Wireless Telecommunications Summit into Section 255 regulations.

Text Telephones (TTYs). People who use TTYs need to be able to directly connect the TTY to digital phones. TTYs operating in Baudot mode are incompatible with digital phones, either wired or wireless. Organizations needing to use a TTY over a digital PBX system can use a TTY in ASCII mode but not in Baudot. This is a compatibility problem which must be addressed collaboratively by

both TTY and phone manufacturers.

Standardized Jacks. Many people who are hard of hearing use assistive listening device attachments to hear better on wireline phones. To ensure such access, a standardized jack outlet should be included in all phones to allow users to plug in these attachments.

Visual Format for Operational Sounds. More and more telecommunication devices and services use voice and/or sound to provide information to the user, such as CD-ROM programs, and VCRs. In addition there are operational sounds which, if heard, can provide information on the status of the process, such as a busy signal in fax machines, the click when a tape has finished rewinding. Some of these products build in redundancy, that is more than one way of providing the same information. This is very necessary for people with disabilities. For example, people with hearing loss need auditory information provided in visual format also. Unfortunately not all companies include redundancy into their design.

Voice Mail Systems. These are nightmares for people who are hard of hearing. The messages often go fast, and there is no opportunity to ask for a repeat, so it is a very difficult for hard of hearing people to use them, even with the various devices which some people rely upon to use the voice phone. SHHH recommends a "universal out", a standardized escape (e.g. dial "0" to a human

response for those who cannot hear the message). We understand that software packages are coming onto the market which allow companies to customize their own voice mail systems. This makes the solution to this problem even more complex. Therefore, we strongly urge a uniform method of opting out of such mechanical systems.

TTY users are also locked out of using voice mail systems. There is a technological solution now on the market which gives manufacturers of automated phone systems the ability to record scripts not only in voice but in baudot (for TTY users) as well. This is not a device that individuals can install in their own phone system, but one that must be incorporated into an organization's telephone switching system. In other words, the organization must take the initiative to provide this form of telephone access to TTY users, if it is going to be provided.

Teleconferencing and Videoconferencing. These are both gaining momentum as cost effective ways to hold meetings with participants from diverse locations. This form of telecommunication must be captioned in order for it to be accessible to those people who are hard of hearing who rely on captioning. SHHH urges the FCC to address the issue of who is responsible for ensuring that the captions have pass through?

4. Compatibility

24. Digital PBX telephone systems are not compatible with commonly

used volume control handsets. Public facilities, such as hotels with digital telephone systems, encounter problems when trying to supply a guest with a volume control. They do not work together.

Non-modular Phones. In the U.S today, there are about 7,000 cochlear implant recipients (adults and children). Approximately 30% of them use the voice phone with their implants and need a modular phone to be able to plug in their connecting cord to feed the incoming voice directly into the speech processor of the cochlear implant.

In-line amplifiers, assistive listening devices, such as direct audio input and FM systems, are also used by hearing aid wearers to access the phone system and need to be plugged in directly. If the wireline phone is not modular they cannot access it.

25. Hearing aids may not be classified as telecommunication devices but they are a key component piece which allows many people to use the telephone, either acoustically or inductively. In a survey of the SHHH membership, 88 percent use hearing aids and 55% use them when talking on the phone. 61% indicated they both have and use a telecoil for inductive coupling directly with the phone. When designing a handset earpiece, shape is an important consideration for acoustic coupling with a hearing aid to minimize the amount of feedback which can create a barrier to using the voice phone for hearing aid users. Also some method to allow for direct coupling

of hearing aid and phone is important for those people who currently couple through a telecoil.

Examples of specialized CPEs are "VCO phones" which allow people who are hard of hearing to speak their message but has a screen to allow them to read the message typed back by the relay operator. VCO phones also have limited capability to function as a TTY.

TTYs are also specialized CPEs. These devices are used by hard of hearing and deaf people to access the voice telephone system through relay services. As the dividing line between cable, TV and computer providers disappears, there is a need to ensure that the technical capability to continue both interstate and intrastate relay service remains intact.

There are 7 different TTY coding systems which cannot work together. To ensure that people who are hard of hearing or deaf have an effective means to make a telephone call, there must be a convergence of these diverse coding systems. There is a need for a standard, such a V.18, which will allow the various TTY systems to communicate with each other.

Alternatively a PC may be used with software that will enable ASCII TTY communication. However, this is not available for use with Baudot code without a specialized, overpriced modem. Standardization of codes, on a national and international level is

needed. Not all modems have TTY capability and those that do have are very expensive.

SHHH appreciates the opportunity to respond to this NOI and again strongly urges the FCC to promulgate regulations for Section 255 of the Telecommunications Act.

Respectfully submitted,

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